

524,247
10/524247

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
11 March 2004 (11.03.2004)

PCT

(10) International Publication Number
WO 2004/020506 A2

- (51) International Patent Classification⁷: C08J GODINICH, Chris, E. [US/US]; 3510 Bluebonnet Blvd., Houston, TX 77025 (US).
- (21) International Application Number: PCT/US2003/027082 (74) Agents: WHEWELL, Christopher, J. et al.; Huntsman LLC, 7114 North Lamar Blvd., Austin, TX 78752 (US).
- (22) International Filing Date: 29 August 2003 (29.08.2003) (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/407,112 30 August 2002 (30.08.2002) US
60/409,492 10 September 2002 (10.09.2002) US
- (71) Applicant (*for all designated States except US*): HUNTS-MAN PETROCHEMICAL CORPORATION [US/US]; 7114 North Lamar Blvd., Austin, TX 78752 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): KLEIN, Howard, P. [US/US]; 5200 Welcome Glen, Austin, TX 78759 (US). BURTON, Bruce, L. [US/US]; 3400 Ashmere Cove, Round Rock, TX 78681 (US). FORKNER, Matthew, W. [US/US]; 9002 Braesgate Cove, Austin, TX 78717 (US). ALEXANDER, David, C. [US/US]; 10904 Yorktown Cove, Austin, TX 78726 (US). RENKEN, Terry, L. [US/US]; 11103 Yucca Drive, Austin, TX 78759 (US).
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: POLYETHER POLYAMINE AGENTS AND MIXTURES THEREFOR

(57) Abstract: Provided herein are polyamine precursors useful in the manufacture of epoxy resins. Use of a polyamine precursor according to the invention provides an epoxy resin formulation having an increased working time over prior art amines used for curing epoxies. Increased working times translate to the ability to manufacture composites which could not be made using conventional epoxy curing agents, such as composite blades for wind-driven turbines. Such polyamines are also useful in polyurea formulations for lengthening reaction time, thus allowing more flow of applied polyurea coatings prior to gellation.



WO 2004/020506 A2